

Landscape Development Requirements & Policies

FREMONT MUNICIPAL CODE SECTIONS:

**FMC 4-5000
FMC 8-1511
FMC 8-22000
FMC 8-22700
FIRE CODE**

These City Standards are updated periodically. Most current copy available at the Engineering counter or on line shall prevail.

Available on line at: www.fremont.gov/CityHall/Departments/Engineering.htm

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Minimum Landscape Requirements & Policies for Development Organization Submittal

The following list of items and minimum requirements must be completed during the Development Organization review process prior to issuing a building permit. There may be other conditions that pertain to an individual development that are not listed below. Applicants will be made aware of such requirements during the Development Organization Review.

- ☐ Per FMC Title 8, Chapter 2, Article 27, submit completed landscape and irrigation plans including specifications in compliance with all city requirements. The landscape plans shall denote “the location of all existing and proposed on-site landscape materials and street trees including a complete keyed plant list showing quantities, container sizes, and correct botanical designations of all landscape materials; design details for such landscape architectural features as walls or fences, lighting, paving patterns, arbors, benches, fountains and other like features; and complete irrigation plans.” “All areas not otherwise occupied by structure or paved areas shall be landscaped and irrigated by an adequate irrigation system.”
- ☐ Per FMC 8-22706, non single-family home landscape plans submitted for approval must be prepared and signed by a Landscape Architect licensed by the State of California in conformance with Title 16, Division 26 of the California Code of Regulations.
- ☐ Water Use Certification prepared by the project Landscape Architect is required on non-single family home projects. Submit to the City of Fremont the completed Certification with supporting data in conformance with the State of California Water Efficiency Act (AB325). A copy of the Certificate must be submitted to the Alameda County Water District. Form attached.
- ☐ Per FMC 8-1511, Street trees are required in all subdivisions. Trees must be shown in the street right-of-way or minimum 7-foot wide planting easement and identified by proposed species. City of Fremont street trees and all trees in the City right-of-way require bubblers. Trees to be installed in conformance with the City Standard Tree Planting Detail, SD-34 attached.
- ☐ The following note is required on landscape plans for Residential Tract Developments. “Contact City of Fremont Park Superintendent at 510-713-5728, prior to street tree planting for approval of locations, and after planting for final inspection and acceptance of all right-of-way and back-up landscaping.”
- ☐ The following note is required on all landscape plans: “Contact the Project Landscape Architect for final inspection of landscape and irrigation. Prior to release of building for occupancy, the Project Landscape Architect will submit a letter to the City of Fremont certifying the planting and irrigation has been installed in conformance with the approved planting and irrigation plans, subject to the review and approval of the City Landscape Architect. **Securities in lieu of installation will not be accepted.**”
- ☐ Per FMC 8-22009, parking lots require one (1) tree per every three (3) parking spaces on all parking areas adjacent to the property perimeter. These trees shall be planted along the perimeter of the property adjacent to the parking area in planters free of inorganic material and measuring not less than six feet wide. Parking areas not adjacent to perimeter require one (1) tree per every ten (10) parking spaces; however, these trees must be evenly distributed within the parking area. These trees shall be large canopy trees located in the largest size planter feasible free of inorganic material with a minimum 6’ wide area in any direction (i.e., interior planter

width, not including curbs, to be minimum 6') and no less than 48 square feet of soil surface area overall.

- ☐ Per FMC 8-22009, a three-foot masonry wall, three-foot tall berm or a continuous shrub planting, 5-gallon size minimum will screen parking areas within fifty (50) feet of a public street. Minimum 15-gallon size trees and shrub/ground cover planting is also required.
- ☐ Per FMC 8-22706, at least one tree or an existing tree (approved by the City) shall be retained for every five hundred square feet or fraction thereof of landscaped area. PLANTING PLAN MUST LIST TOTAL SQUARE FEET OF LANDSCAPE AREA AND TOTAL TREES ON PLAN. Street trees and right-of-way landscape area on public streets are not included in the calculation.
- ☐ Per FMC 8-22706, required street trees on public streets, or any private tree serving a street tree like function adjacent to a private street, shall have a minimum size of twenty-four inch box.
- ☐ Per FMC 4-5111, show on Grading Plan, Demolition Plan and Planting Plan all existing trees to be saved, relocated or removed. (See Tree Preservation Requirements on page 4.) Existing trees 6" caliper and larger require approval from the City Landscape Architect before development plan approval. If tree removal is granted, the City Landscape Architect will establish mitigation requirements. If there are no existing trees on the site, the project Civil Engineer or Landscape Architect shall submit a letter to the Development Organization certifying that no trees exist on the site.
- ☐ Plans with trees to be preserved and relocated must conform to the attached handout titled, "City of Fremont Required Tree Preservation Notes and Plan Graphics for Demolition Plan, Grading Plan, and Planting Plan."
- ☐ If root barriers are proposed by applicants, they shall not circle rootballs, but be placed along paving edge. Refer to City Standard Detail SD-34 for further information.
- ☐ Branches from mature trees may not overhang buildings and roofs. Adequate space to plant trees adjacent to buildings or other built features must be provided in the following minimum ways:
 1. Small trees (to 15 feet tall) no closer than 6 feet from building or 2 feet* from paving, curbs, or walls with a minimum planting area 5 feet wide.
 2. Medium trees (to 30 feet tall) no closer than 10 feet from building or 3 feet* from paving, curbs, or walls with a minimum planting area 6 feet wide.
 3. Large trees (above 30 feet tall) no closer than 15 feet from building or 3 feet* from paving, curbs, or walls with a minimum planting area 6 feet wide, preferably 8 feet wide.

* Refer to City Standard Details (attached) for required spacing from utilities.
- ☐ Install 3" shredded (Walk-on) bark mulch in all planting areas not shown to receive turf or hydroseed. Use of "gorilla hair" or "angel hair" is prohibited.
- ☐ Per Fremont Fire Code, fire prevention Wetband is required in Hill Area developments adjacent to open space or undeveloped land. Minimum Wetband installation includes a 30-foot wide spray irrigated or paved protection zone between structure and open space along rear of property. Minimum planting is low growing fire-resistant groundcover or grass. High canopy trees may be added. However, mature canopy may not be closer than 10 feet to any other mature canopy or structure. Hardscape surfaces and pools may be in Wetband. Large understory shrubs and auxiliary structures are not allowed. Label and dimension Wetband on plans.

Minimum Standards for Irrigation Plans

The following list of items and minimum requirements must be included on all automatic irrigation plans submitted to the Development Organization for landscape review.

- ☐ Location and size of all meters, points of connection, pumps, isolation valves and remote control valves.
- ☐ Maximum GPM (Gallons Per Minute) demand and minimum operating pressure for each point of connection. GPM demand for each valve.
- ☐ Size and location of all pipes including sleeves for the irrigation system
- ☐ Type, location, and GPM demand for each sprinkler head.
- ☐ Location and type of all hose bibs and quick couplers.
- ☐ Location and type of controller, wire size, and watering schedule.
- ☐ Completed Landscape Water Use Certificate.
- ☐ Details as required to install irrigation system as designed.
- ☐ The following minimum requirements must be shown on the plans:
 - a) All lateral lines shall have 12" cover.
 - b) All main lines shall have 18" cover.
 - c) All main lines and wiring under pavement shall be sleeved with 24" cover.
 - d) All lateral lines under pavement shall be sleeved with 18" cover.
 - e) A Reduced Pressure Backflow Prevention Device (with enclosure) of the same size as the meter shall be installed at every meter on the project. The model and installation of the Backflow Prevention Unit is subject to approval from the Alameda County Water District. A weather blanket shall be installed on all backflow prevention devices.
- ☐ Back-up landscaping or any landscaping that will be maintained or owned by the City must have a separate meter, backflow prevention device and controller. Additional irrigation standards and requirements may apply to City owned landscape areas. Contact Larry Soto, in Parks Maintenance at (510) 713-5732.
- ☐ All trees must be irrigated by individual bubblers on an irrigation circuit isolated from the main system by a remote control valve.

Tree Preservation Requirements

DBH = Diameter of trunk at Breast Height (4 ½ feet from ground level)

Pursuant to the City of Fremont Tree Preservation Ordinance FMC Section 4-5101, the City regulates the removal and destruction of existing trees to preserve the visual beauty that trees provide to the residents and visitors to the city, environmental benefit they provide such as reducing heat buildup and controlling wind and erosion, and their contribution to property values. Trees have value as individual trees, as groups of trees, and as a component of the overall urban forest. To the extent that trees are contributing in these ways to the public welfare of the people of the City of Fremont, trees will be protected and preserved through the regulation of their removal and damage to them.

DEVELOPMENT PROJECTS AND TREE REMOVALS

In the course of a development project, the City requires that all trees with a DBH of 6" or more, other than commercial nut and fruit bearing trees (except Black Walnut & Olive) or are part of any previous development approval, cannot be removed without a completed development application that includes an approval or recommendation from the City Landscape Architect and acted on by the final decision making body (i.e., Planning Commission, City Council, etc.). Tree removals are considered in the context of the development application and if granted, will be part of any final development approval.

Therefore, all submissions for Tentative Tract Maps, Tentative Parcel Maps, Planned Districts, Conditional Use Permits, Variances and all development plans (Development Organization) are subject to Tree Preservation Ordinance requirements (including tree surveys) as outlined in this and the following sections.

TREE REMOVALS THAT ARE NOT CONNECTED WITH DEVELOPMENT

Tree removal requests that do not have a development application pending or contemplated may submit a written application. An application with instruction, suitable for photocopying is on page 9 of this document. A subsequent arborist analysis report or tree survey may be required.

INFORMATION AVAILABLE ON TREES FROM OTHER SOURCES

The National Arbor Day Foundation (www.arborday.org) produces a Tree City USA Bulletin that provides a straightforward approach to tree care. Download the bulletin from the Urban Forest Ecosystems Institute, sponsored by California Polytechnic State University
<http://www.ufei.calpoly.edu/data/abstracts/TCENGLIS.pdf>

The International Society of Arboriculture produces a number of consumer-oriented brochures to help people purchase and care for trees. You can download brochures for free at
<http://www.isa-arbor.com/consumer/consumer.html>

The Arbor Day Foundation has a training and awards program for developers committed to tree preservation through development. Read more on the program at
<http://www.arborday.org/programs/buildingwithtrees/>

Tree Survey Standards

DBH = Diameter of trunk at Breast Height (4 ½ feet from ground level)

An Existing Tree Survey is required for all Tentative Tract Maps, Tentative Parcel Maps, Planned Districts, Conditional Use Permit, Variance, Demolition Permit, Grading Permit, and all Development Plans subject to review by the Development Organization. Single-family home additions require a tree survey of only the front yard if the lot is 10,000 square feet or less. The information contained on an accurate tree survey provides the City Landscape Architect with sufficient information upon which to make decisions regarding the preservation of trees.

Sites with no existing trees may avoid the Tree Survey requirement by submitting a letter signed by a licensed Civil Engineer, Licensed Landscape Architect, or Certified Arborist attesting to the fact that there are no existing trees on the site. An Existing Tree Survey shall be submitted for approval with the Development Plans/application as follows:

1. Tree Survey shall be included on the Grading Plan, Demolition Plan, or as a separate sheet at same scale as Improvement/Development Plans, numbered in sequence with the project plans.
2. Tree Survey shall show all trees with 6-inch DBH or greater or all trees if the site has trees approved under another project approval. Trees shall be correctly labeled with species, DBH, and spot elevation at base of tree.
3. Tree Survey must accurately locate tree trunks and canopies, and be prepared by and certified by a licensed Surveyor, Civil Engineer or Landscape Architect. If no trees 6-inch DBH or greater exist on the site, the Civil Engineer or Landscape Architect shall submit a letter with application, or Development Plan Submittal stating that no trees exist.
4. Tree Survey shall clearly indicate those trees the applicant prefers to be relocate, preserved in place, or remove. Emphasis shall be on tree preservation. For development plans with trees to be preserved refer to page 7, “Standard Tree Preservation Notes...” and page 8, “Standard Tree Preservation Plan Graphics....”
5. Tree Survey must be reviewed and approved by the City Landscape Architect prior to Planned District approval, Tentative Map approval, Demolition Plan approval or Grading Plan approval. Commercial fruit or nut bearing trees except European Olive and California Black Walnut are not required on the survey.
6. Tree Survey shall show layout of all existing and proposed buildings and paving.

The requirement as stated above is consistent with the directions set forth in Title 4, Chapter 5 of the Fremont Municipal Code. This condition may be waived by the City Landscape Architect in cases where the cost of preparing a Tree Survey is not appropriate given the cost of improvement proposed. In such cases, an individual Tree Removal Permit may be requested in writing to the City Landscape Architect. An approved Tree Removal Permit must be obtained prior to approval of Tentative Map, Grading Permit, Demolition Permit or Development Plan.

The City Landscape Architect will review the survey and may recommend approval or denial for the requested removal(s). An arborist report may be required for certain trees before recommendations are made. All arborist analysis will be prepared by the City’s consulting arborist at the expense of the applicant. Final development plans for grading and/or demolition will conform to the City’s Standard Tree Preservation Notes & Graphics (page 7).

Arborist Analysis Report Standards

An arborist analysis report is required to make a more detailed assessment of an individual tree's suitability for preservation. The report shall be prepared by an Arborist Certified by the ISA (International Society of Arboriculture) and approved by the City of Fremont. The City will require a deposit (estimated amount) from the applicant in order to cover the cost of the arborist report. Any unused amount of the deposit will be returned to the applicant.

The arborist report will include, at a minimum, the following factors in the evaluation of suitability for preservation:

***Tree health**

Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction, than are non-vigorous trees.

***Structural Integrity**

Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees will not be preserved in areas where damage to people or property is likely to occur.

***Species response**

There is a wide variation in the response of individual species to construction impacts and changes in the environment.

***Tree age and longevity**

Old trees, while having significant emotional and aesthetic appeal, sometimes have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change. Older trees may require modifications to the development proposal, to achieve preservation.

***Other evaluation as identified by the City**

Each project has unique features that may impact trees. The analysis will explore innovative alternatives in design that promote preservation of quality trees. The City may choose to require tree appraisals on complex projects where significant development may occur near trees to be preserved. Tree appraisals will provide a basis of penalties for destruction of trees during construction.

Each tree shall be given a rating regarding suitability for preservation based upon its age, health, structural condition and ability to safely coexist within the development environment.

Standard Tree Preservation Notes **for Demolition Plans, Grading Plans and Planting Plans**

The following are minimum requirements for projects that have existing trees that will be preserved or relocated. The City of Fremont recognizes that tree preservation measures that take into account the unique requirements of the tree species, age, condition, and site conditions achieve the best results. A good resource for tree preservation is the Tree Technical Manual written by the City of Palo Alto and available on their web site, www.city.palo-alto.ca.us/trees/technical-manual.html.

The project arborist may recommend changes to these requirements subject to the approval of the City Landscape Architect. For all projects where preservation of existing trees is required approval will not be given for grading, demolition or building permits, Tentative Tract Maps, Tentative Parcel Maps, Planned Districts, Conditional Use Permits, Variance, and any Development Plan until the Demolition Plans, Grading Plans, and Planting Plans include the following notes:

TREE PRESERVATION NOTES

1. TREE PRESERVATION REQUIRED BEFORE DEMOLITION OR CONSTRUCTION BEGINS.
2. Trees called out for preservation shall be fenced at the dripline. Fencing may occur at the combined driplines of groves of trees. Place 3" bark mulch beneath driplines of trees to be preserved.
3. Fencing shall be 6-foot tall chain link fencing with steel posts embedded in the ground.
4. No grading shall occur within the driplines/fenced area of existing trees.
5. No construction materials or construction vehicles may be stored within the driplines/fencing area of existing trees.
6. Construction vehicles or machinery may not pass between two or more existing trees identified for preservation if their canopies are within 10 feet of touching. Additional fencing may be required by the City of Fremont to enforce this.
7. Tree preservation measures must be in place before construction, demolition or grading activities commence. City of Fremont will stop construction if tree preservation measures are not in place and maintained throughout the construction period.
8. The contractor is required to have an arborist certified by the International Society of Arboriculture (ISA) on site if site construction efforts require removal of existing roots or branch pruning. A certified arborist, approved by the City of Fremont, shall be on site and monitor all root pruning and branch pruning of existing trees.
9. Unauthorized tree removal is subject to replacement equal to the appraised value of the tree lost.
10. The Contractor is required to water, fertilize and attend to other maintenance needs of existing trees as needed to maintain healthy growth throughout the construction period. Six foot diameter, minimum, by six-inch tall earth berms shall be constructed at the base of each tree to function as temporary watering basins during the construction period. Trees shall be watered according to weather and tree requirements.
11. If trees are being relocated: Relocation of existing trees shall occur under the observation and direction of a certified arborist approved by the City of Fremont. See additional notes regarding tree relocation.

Standard Tree Preservation (Survey) Plan Graphics for Demolition Plans, Grading Plans and Planting Plans

PLAN REQUIREMENTS (FOR PROJECTS WITH TREES BEING PRESERVED)

Plans must show the removal, relocation, or preservation of trees (e.g., demolition plans, grading plans, etc.) by including the following:

1. Plans shall show all existing trees regardless of disposition, with accurate trunk location, tree canopy, species, and caliper size. Groves of existing trees of the same species to be preserved may be shown with a combined canopy line and no trunk locations. Each individual tree, however, must be listed by species and DBH size.
2. All species must be identified.
3. Fencing at trees to be preserved must be shown on the plan along with reference details for tree preservation fencing (City Standard Detail SD-34).
4. All trees to be removed shall be clearly identified with an “X” and called out for removal. Plan identification must include species and caliper size.
5. Call out on the plan each tree to be preserved, by species and caliper size, and reference tree preservation notes elsewhere on the sheet.
6. Call out on the plan each tree to be relocated, by species and caliper size. The plan shall clearly show existing location of each tree and the future location of the same tree. Tree relocation notes and directions shall be developed by a certified arborist and included on the plan where the tree relocation is shown. Relocation notes shall include the name and phone number of the certified arborist in charge of the tree location and shall state that the contractor is required to have the certified arborist monitor all work associated with the tree relocation.



TREE PERMIT #: T04-____.____
For Office Use Only

Tree Removal Application & Permit

Permit Not Valid Without City Approved Signature and Date Stamp

Development and Environmental Services Department
39550 Liberty St., P.O. Box 5006 • Fremont, California 94537-5006

510/494-4700
FAX 510/494-4721

Application must be complete - Instructions on back

APPLICANT: _____	
MAILING ADDRESS: _____	
Phone: _____ (____) _____	
OWNER: _____	
PROPERTY ADDRESS: _____ (Address of Trees) _____	
I grant the City or City's agent permission to go on property for inspection of tree(s).	Yes / No
Is any development planned for this property? If yes, this permit is NOT VALID regardless of approval.	Yes / No

APPLICATION DATE: _____

DIAGRAM OF TREES & PROPERTY: (Attach Plan if necessary)

PERMIT TREE(S):		
Description (Species, if known):	Quantity:	
Author & Date of Arborist Report (if provided):		
Removal Justification/Reason:		
PREFERRED REPLACEMENT TREES:		
Species:	Quantity:	

*******DO NOT FILL IN BELOW THIS LINE*******

REQUIRED MITIGATION:	Species: _____	Total New Trees: _____
	Mitigation Complete By: <u>Within 30 days after removal</u>	Size: _____
	<u>but before expiration of permit.</u>	
Additional Requirements: All stumps must be ground and removed to a two-foot depth minimum. This Permit expires 6 months from the date of approval (see expiration date below). Install trees per City Standard Detail SD-34. All pruning must be per International Society of Arboriculture (ISA) standards.		

<i>To appeal a permit denial before the City Council, contact the City Clerk's office within ten days from the date of this notice. Call (510) 284-4060</i>	Roger E. Ravenstad City Landscape Architect (510) 494-4700	<i>Date Stamp (Completed)</i>
Comments:		
		Permit Expires: _____
MITIGATION COMPLETE:	Inspected by:	Date:

CC: Parks Maintenance Supervisor (G. Reta)

WHEN IS A PERMIT REQUIRED?

The City of Fremont Tree Preservation Ordinance FMC Section 4-5100 limits the removal of private trees.

YOU DO require a tree removal permit if your tree is:

- ☐ 18" DBH* or larger,
- ☐ 10" DBH or larger if native to Fremont**,
- ☐ 6" DBH if on underdeveloped or vacant land or
- ☐ Any size DBH if it was required through a previous development approval.

... and your tree is located within:

- ☐ Any non-Single Family Home lot in Fremont,
- ☐ Any Single Family Home lot larger than 10,000 square feet, or
- ☐ The front yard of any Single Family Home lot 10,000 square feet or less (A side yard facing a street on a corner lot is regulated as a front yard.)

YOU DO NOT need a permit if your tree species is:

- ☐ A commercial-type fruit or nut bearing tree (except Walnuts and Olives are protected and do require permits for removal),

... or your tree is located within:

- ☐ The rear or side yard of any Single Family Home lot 10,000 square feet or less.

Definitions:

- * DBH – Diameter at Breast Height (Trunk diameter measured four and one half feet from ground level).
- ** Trees Native to Fremont includes Oak, Redwood, Buckeye, Madrone, Sycamore, Big-Leaf Maple, Redbud, and Bay. Additionally, a list of non-native trees that have exceptional adaptability to Fremont and are treated as native trees, include Fremont Cottonwood, California Pepper, European Olive, Black Walnut, and Deodar Cedar.

CRITERIA FOR GRANTING PERMITS:

The City promotes options for preservation of mature healthy trees whenever possible. A tree removal permit will be considered for approval if the tree: 1) is hazardous to person or property and cannot be corrected to be safe, 2) has a short life expectancy, 3) is a host to disease that endangers other trees, 4) is part of a group that is overcrowded, 5) makes reasonable development of the property impossible, 6) makes full enjoyment of an existing structure or utility (gas, water, etc.) impossible., or 7) has been damaged to the extent that it cannot be feasibly restored.

If a permit is granted, a 24" box size replacement tree will be required. The tree species should be of similar type and size as the tree removed. A subsequent arborist report or tree survey paid by the applicant may be required to determine if tree meets criteria for removal, such as described above.

INSTRUCTIONS FOR COMPLETING APPLICATION:

1. If you have a development application pending or contemplated with the City, do not use this application. Application for tree removals will be considered together with your development.
2. Fill out the top portion of the application on the opposite side of this sheet. A fee is not required. Incomplete applications will delay approval process or application may be returned.
3. Fax or Mail to the City Landscape Architect at:
City of Fremont, Engineering Division
P.O. Box 5006
Fremont, CA 94537-5006
Fax: 510-494-4646
4. Include your phone number so city staff can call with questions.
5. Expect 5 to 10 working days for a fully processed application unless the City requires additional information. Applications must be made at least 15 days before proposed date for tree removal.
6. Call (510) 494-4700 for final inspection after replacement tree(s) is planted.

Self Certification for Landscape Inspection of Private Developments

The City of Fremont requires that requests for landscape inspection be accompanied by a letter from the Project Landscape Architect stating that the landscape is 100% complete and installed per the approved permit plans and specifications. The City will follow up with a final inspection and project sign off. The City will perform landscape inspections or approvals for Tract Acceptance or Certificate of Occupancy only after receipt of signed certification letter, executed by the Landscape Architect of record. Landscape Architecture certification is not required for single-family home projects

Submit Landscape Certification Letter along with a request for City Landscape Inspection to the following (Include Tract Number or Permit Number on all correspondence):

For Tract Acceptance:

Engineering Construction Inspection
Development and Environmental Services Department
39550 Liberty Street
Fremont, CA 93537-5006
Ph: (510) 494-4700
Fax: (510) 494-4646

For Certificate of Occupancy:

Development Organization (Landscape Inspection)
Development and Environmental Services Department
39550 Liberty Street
Fremont, CA 93537-5005
Ph: (510) 494-4482
Fax: (510) 494-4820

Miscellaneous Landscape Inspection Requests:

City Landscape Architect
Development and Environmental Services Department
39550 Liberty Street
Fremont, CA 94537-5006
Ph: (510) 494-4696
Fax: (510) 494-4646

Guidelines for Landscaping in PG&E's Electric Transmission Rights-of-Way

Installation of landscaping can be acceptable in PG&E's electric transmission rights-of-way. However, landscaping must not be allowed to compromise safe clearance between plants and conductors or between plants and structures (towers or poles), nor shall landscaping impede access or prevent easy inspection of facilities. PG&E will not consent to landscaping designs that increase its maintenance costs or have the potential of creating future service reliability or public safety issues. Developers should always consult with the local PG&E land agent or transmission line supervisor before finalizing landscape plans in the vicinity of electric transmission facilities.

Line Clearance

Plants should not be installed that could ultimately grow within the minimum acceptable clearance distances of plants from conductors stated in the table below. In general, the acceptable mature height of plants for a given situation will be determined by the height of the conductor above the ground and the voltage of the line. Using a conductor height of 30' (35' for 500,00 volts) results in maximum plant heights as follows:

Voltage	Minimum Clearance of Plants from Conductor	Maximum Plant Heights
60,000 volts	10'	20'
115,000 volts	15'	15'
230,000 volts	20'	10'
500,000 volts	25'	10'

For other situations where conductor height exceeds 30' (35' for 500,000 volts), maximum acceptable plant heights can be adjusted. However, a site-specific evaluation by PG&E would need to be made to confirm maximum acceptable heights of plants, because the apparent height of conductors can be reduced during peak electric loads. If needed, developers should provide information on proposed plant species and identify likely maximum plant heights, so that planting plans can be properly reviewed.

Structure Clearance

Trees or shrubs should not be planted within 10' of structures (towers or poles) or down guys. The policy of PG&E is to keep trees and brush clear from the outer circumference of transmission structures by at least 10 feet.

Vehicular Access

All-weather access lanes to structures of at least twelve feet in width should be kept clear of interfering vegetation with a 25 foot wide turning area around each structure if required.

LANDSCAPE WATER USE CERTIFICATION

CITY OF FREMONT "PLN" No. _____
APPLICANT _____
DATE _____
ADDRESS OF PROJECT _____
PROJECT NAME _____
TOTAL LANDSCAPED AREA (NO. OF SQUARE FEET) _____

MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

The maximum annual water use from ACWD water meter(s) is based on the formula below:

$$((ET_O \times ET_O \text{ Factor}) - \text{Effective Rainfall}) \times (\text{Landscaped Area}) \times (.62) \\ = \text{Maximum Applied Water Allowance per year} \\ \text{or for the ACWD Area:}$$

1. $((43.5 \times .80) - 5.20) \times (\text{sq. ft.}) \times (.62) = \text{gallons}$
2. USE THIS FORMULA ONLY FOR PARK OR RECREATION TURF. Plans using this formula must clearly delineate area subject to this higher ET_O Factor.
 $((43.5 \times 1.10) - 5.20) \times (\text{sq. ft.}) \times (.62) = \text{gallons}$

MAWA = total of 1 and 2 = _____ gallons per year

CALCULATED WATER REQUIREMENTS:

- A. The Estimated Total Water Use (ETWU) from adding all of the Hydrozone Estimated Water Use (EWU) quantities, is projected as _____ gallons per year. When subtracting effective rainfall $((5.2 \times \text{sq. ft} \times .62) = \text{gallons})$ from the total ETWU of _____ gallons, it is less than or equal to the MAWA calculated above.
- B. The annual water use generated from the irrigation schedule is _____ gallons per year. When divided by the management irrigation efficiency factor of _____%/100), the total projected annual water use is calculated to be _____ gallons which is less than equal to the MAWA calculated above.

CERTIFICATION:

I certify that the landscape and irrigation plans have been developed according to the Landscape Water Efficiency Ordinance and that this statement represents the landscape water allowance and estimated water requirements of this project (calculations attached).

Name of Landscape Architect/Irrigation Designer (print) _____
Full Address _____
Telephone _____ Fax _____
Date _____ Signature _____

☐ Copy sent to Water Conservation Coordinator, ACWD (P.O. Box 5110, Fremont, CA 94537)

CITY OF FREMONT

STANDARD LANDSCAPE DETAILS (SD-34) FOR CITY PROJECTS AND RIGHT-OF-WAY

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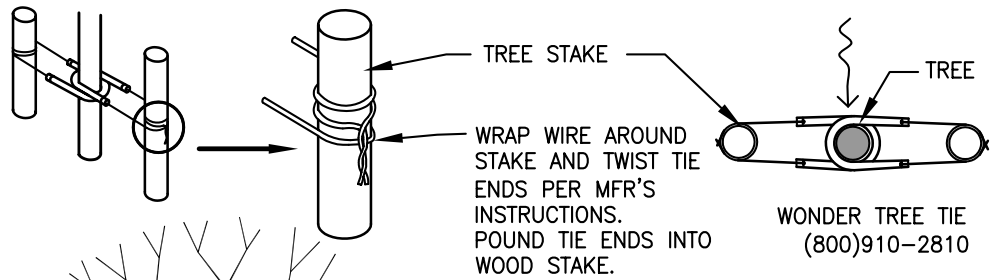
DETAIL

TITLE

- | | |
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| 1. | TREE PLANTING AND STAKING |
| 2. | TREE PLANTING WITH TREE GRATE |
| 3. | SHRUB AND GROUNDCOVER PLANTING |
| 4. | SHRUB AND GROUNDCOVER LAYOUT |
| 5. | STREET TREE CLEARANCES |
| 6. | MEDIAN COBBLE PAVING |
| 7. | MAINTENANCE BAND |
| 8. | TREE PROTECTION FENCING |

IRRIGATION NOTE:
STREET TREES INSTALLED IN THE
CITY RIGHT OF WAY TO INCLUDE
IRRIGATION BUBBLER AND DRAINAGE
TUBE AS SHOWN.

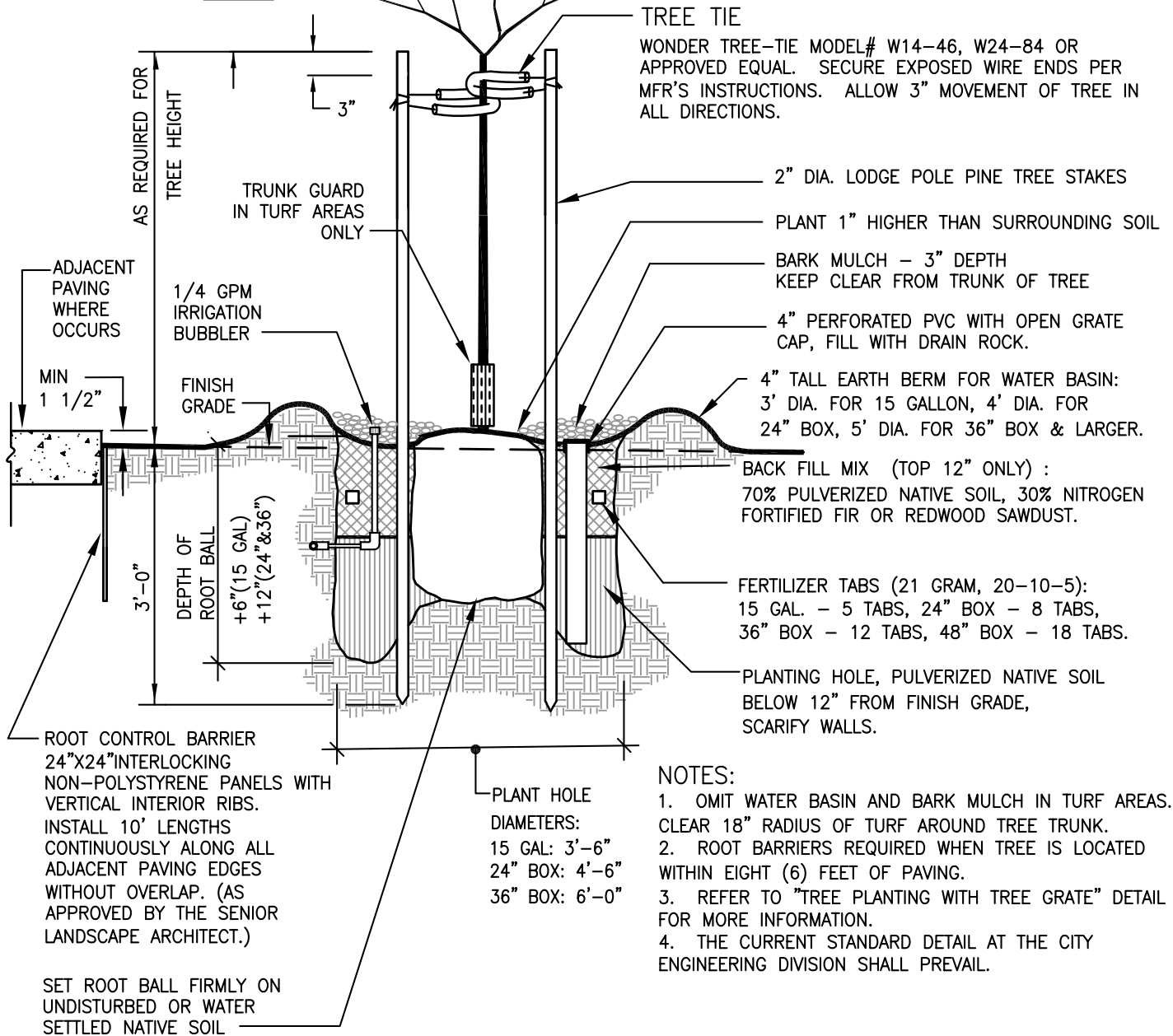
PREVAILING WIND



TOP OF STAKE
6" BELOW HEAD

TREE TIE

WONDER TREE-TIE MODEL# W14-46, W24-84 OR
APPROVED EQUAL. SECURE EXPOSED WIRE ENDS PER
MFR'S INSTRUCTIONS. ALLOW 3" MOVEMENT OF TREE IN
ALL DIRECTIONS.



NOTES:

1. OMIT WATER BASIN AND BARK MULCH IN TURF AREAS. CLEAR 18" RADIUS OF TURF AROUND TREE TRUNK.
2. ROOT BARRIERS REQUIRED WHEN TREE IS LOCATED WITHIN EIGHT (6) FEET OF PAVING.
3. REFER TO "TREE PLANTING WITH TREE GRATE" DETAIL FOR MORE INFORMATION.
4. THE CURRENT STANDARD DETAIL AT THE CITY ENGINEERING DIVISION SHALL PREVAIL.

CITY STANDARD TREE PLANTING AND STAKING

Designed RER

Drawn PHM

Scale NTS

Fremont

DEVELOPMENT AND
ENVIRONMENTAL SERVICES

Approved

Date

Recommended

Date

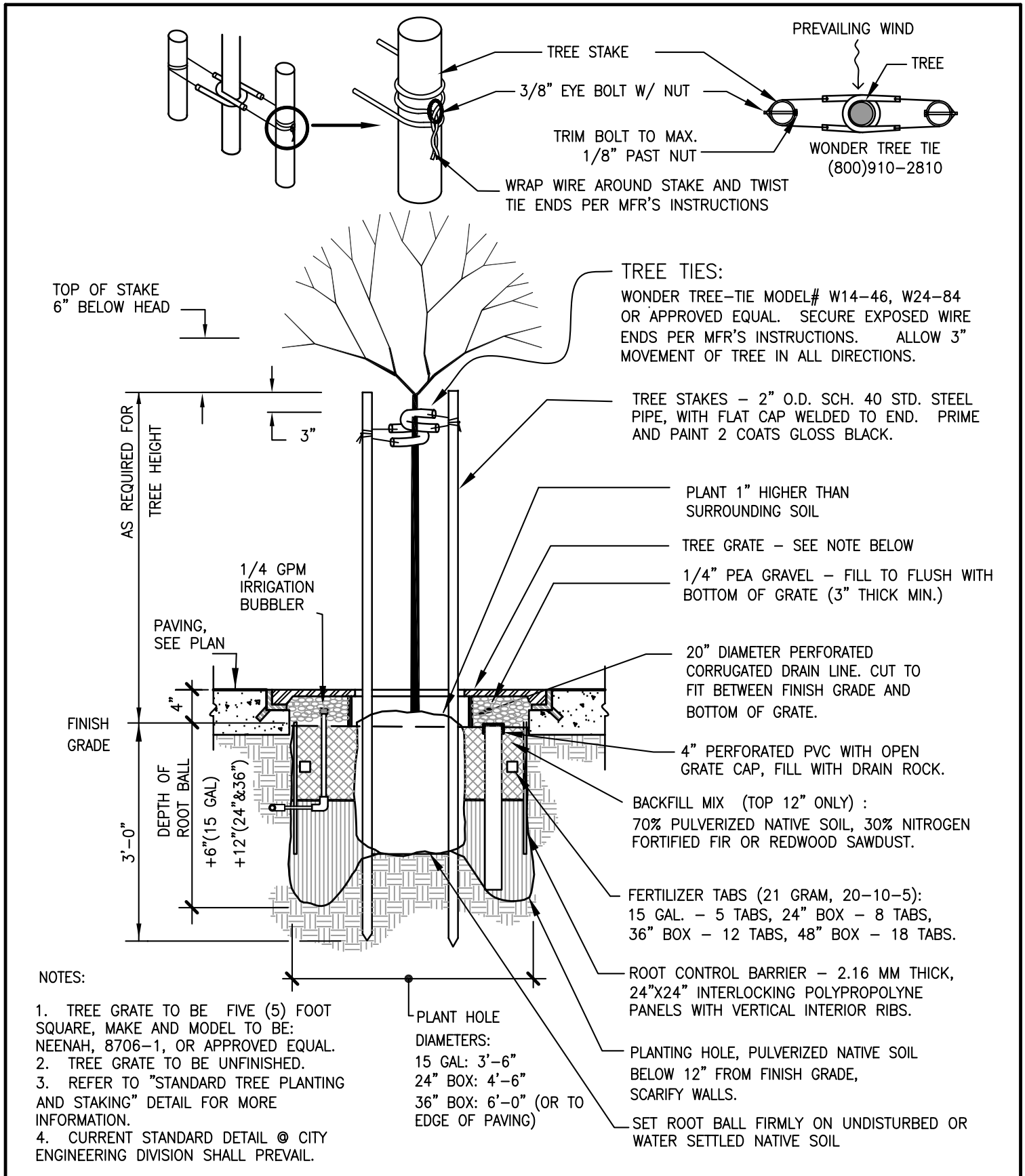
City Engineer

07/02

Sr. Landscape Architect

09/03

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CITY STANDARD TREE PLANTING WITH TREE GRATE

Designed RER

Drawn PHM

Scale NTS



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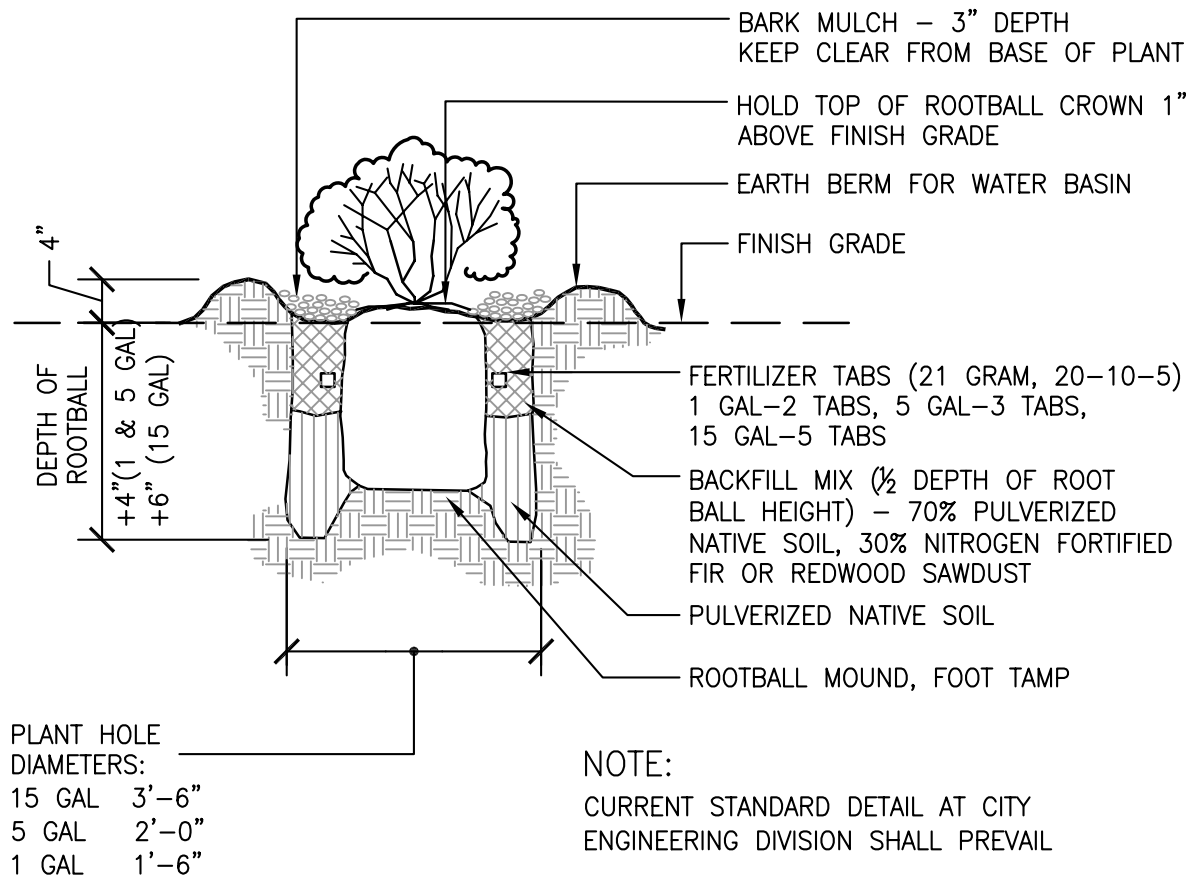
City Engineer

07/02

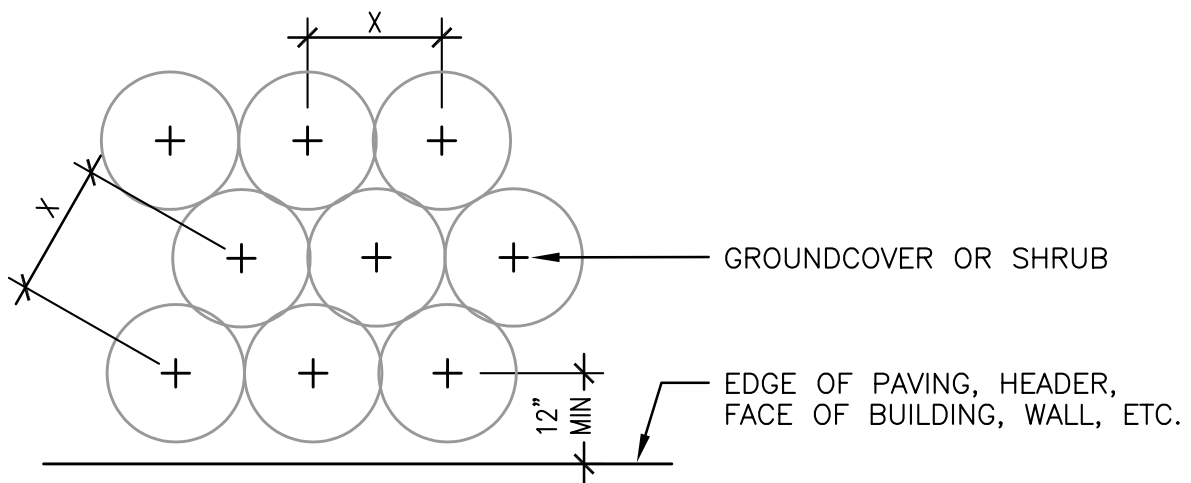
Sr. Landscape Architect

07/02

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CITY STANDARD SHRUB & GROUNDCOVER PLANTING				Designed	RER
				Drawn	PHM
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City Engineer	07/02	Sr. Landscape Architect	07/02		



PLAN

NTS

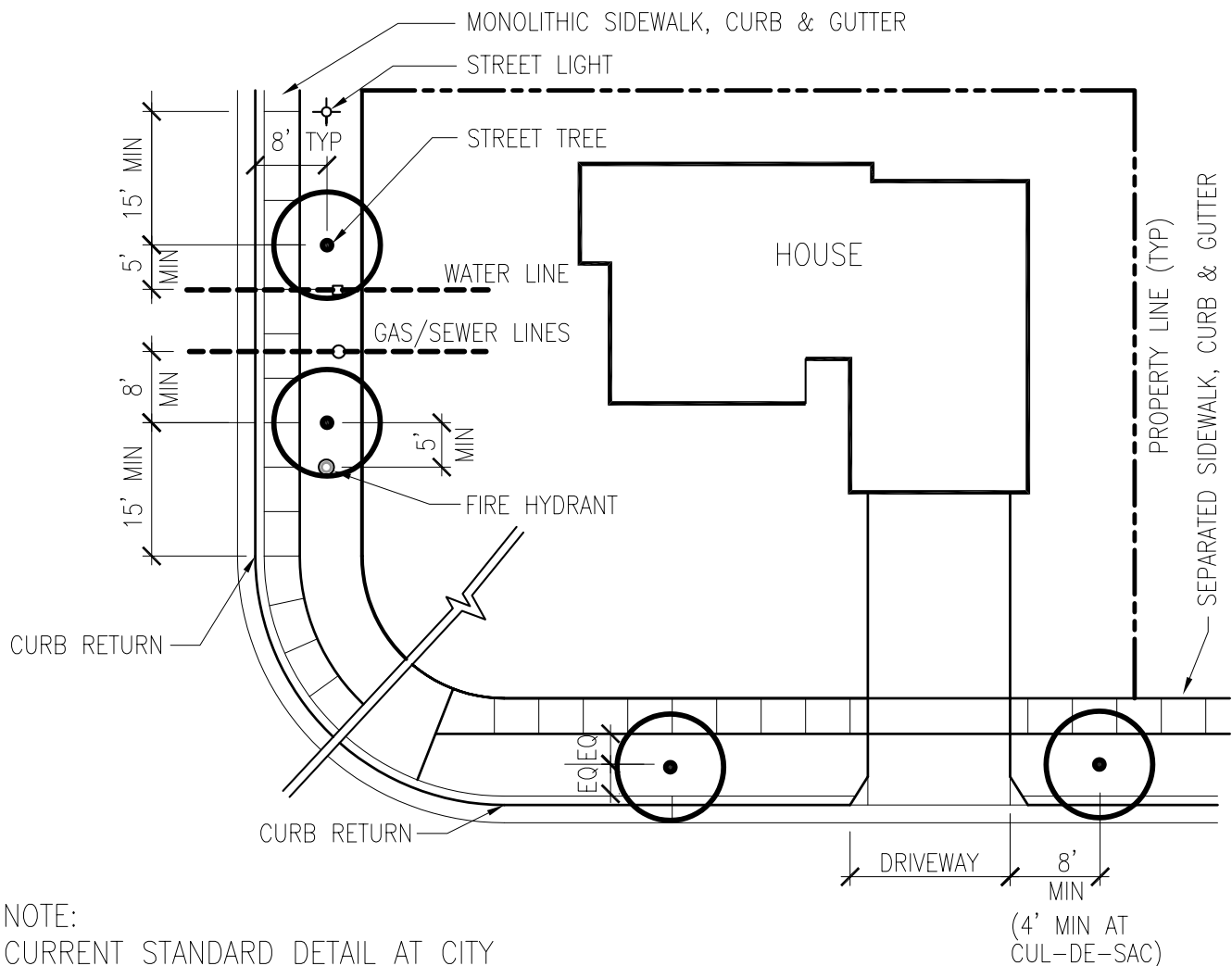
NOTE:

1. 'X' IS GROUNDCOVER AND SHRUB SPACING AS PER LANDSCAPE PLAN, PLANT LIST, AND LEGEND.
2. KEEP MULCH CLEAR OF PLANT BASE.
3. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.

<div> <div>CITY OF</div> <div>Fremont</div> </div>				CITY STANDARD SHRUB & GROUNDCOVER LAYOUT		Designed	RER
				<div>DEVELOPMENT AND ENVIRONMENTAL SERVICES</div>		Drawn	PHM
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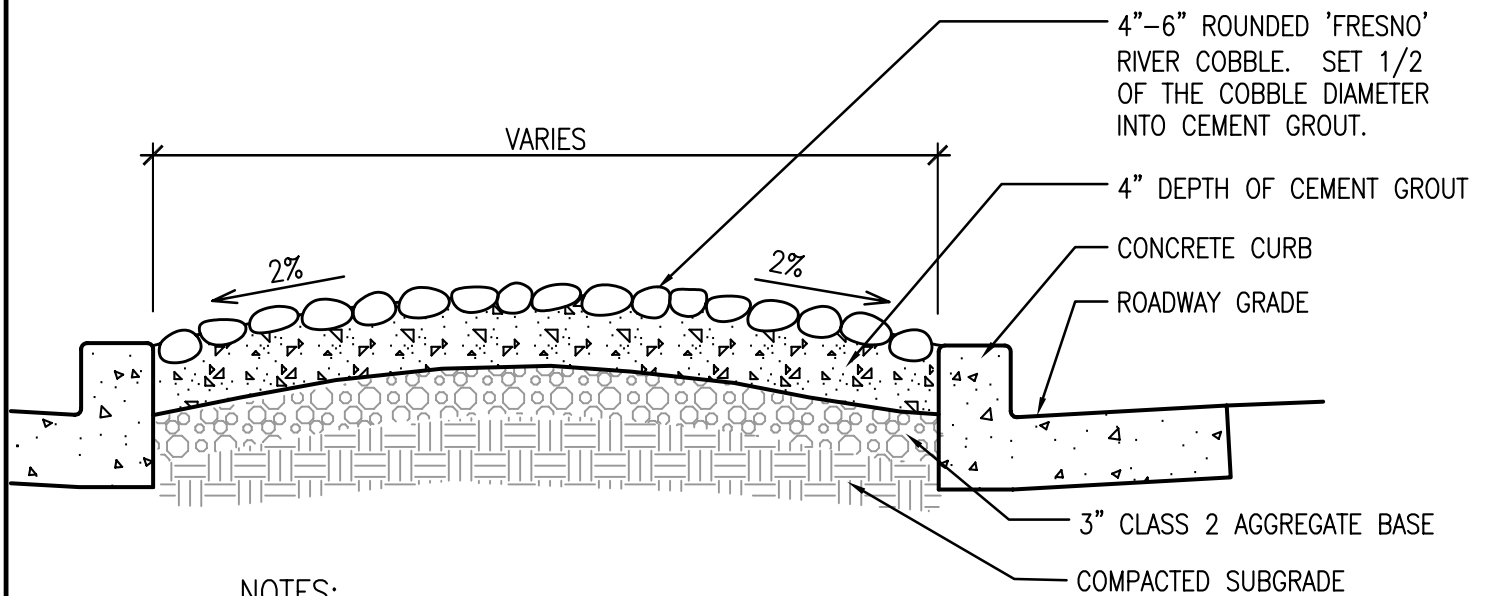
MINIMUM STREET TREE CLEARANCES

1. STREET TREES SHALL BE LOCATED 8' (MIN) FROM SANITARY SEWER, GAS, AND STORMWATER LINES.
2. STREET TREES SHALL BE LOCATED 5' (MIN) FROM WATER, TELEPHONE & ELECTRICAL LINES.
3. STREET TREES SHALL BE LOCATED 5' (MIN) FROM FIRE HYDRANTS.
4. STREET TREES SHALL BE LOCATED 15' (MIN) FROM STREET LIGHTS.
5. STREET TREES SHALL BE LOCATED 8' (MIN) FROM DRIVEWAYS.
6. STREET TREES SHALL BE GENERALLY 35' ON CENTER.
7. STREET TREES SHALL BE LOCATED 15' (MIN) FROM CURB RETURNS.
8. MINIMUM ONE TREE PER LOT REQUIRED, AND TWO PER CORNER LOT.
9. IF LOT WIDTH EXCEEDS 60' AT THE STREET, ONE TREE IS REQUIRED EVERY 35' OF STREET, EXCLUDING LENGTH OF CURB RETURN.




NOTE:
CURRENT STANDARD DETAIL AT CITY
ENGINEERING DIVISION SHALL PREVAIL

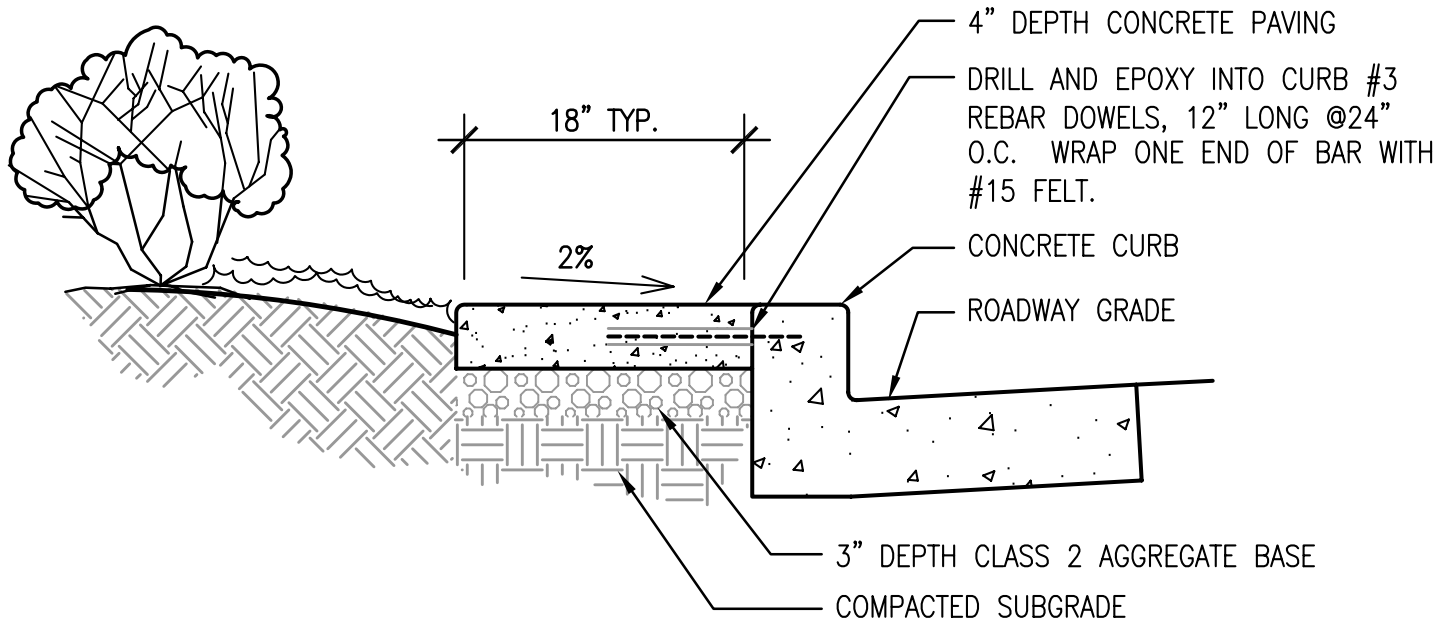
<div> <div> </div> <div> Fremont </div> </div>				CITY STANDARD STREET TREE CLEARANCES		Designed	RER
				<div> <div> </div> <div> Fremont </div> </div> <div> <div>DEVELOPMENT AND ENVIRONMENTAL SERVICES</div> </div>		Drawn	PHM
						Scale	NTS
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NOTES:

1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
2. AGGREGATE BASE TO BE TREATED WITH A PRE-EMERGENT HERBICIDE.
3. CROWN TO BE ROUNDED WITH NO SHARP GRADE BREAKS.
4. MINIMIZE VISIBLE EXPOSED GROUT AT COBBLE JOINTS.
5. SURFACE OF COBBLE FIELD TO BE SMOOTH AND FLAT TO GRADE WITHOUT VARIATION IN HEIGHT OF INDIVIDUAL COBBLES.

<div><div>DEVELOPMENT AND ENVIRONMENTAL SERVICES</div></div>				CITY STANDARD MEDIAN COBBLE PAVING				Designed RER	
								Drawn PHM	
								Scale NTS	
Approved		Date	Recommended		Date	DRWG. NO. SD – 34			
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NOTE:

1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.
2. ON MEDIANS LESS THAN 14' WIDE, MAINTENANCE BAND TO BE REPLACED WITH 18" MIN WIDTH PLANTING OF WALKABLE GROUNDCOVER.
3. INSTALL CONTRACTION JOINTS @ 5' O.C.

CITY STANDARD MAINTENANCE BAND

Designed RER

Drawn PHM

Scale NTS



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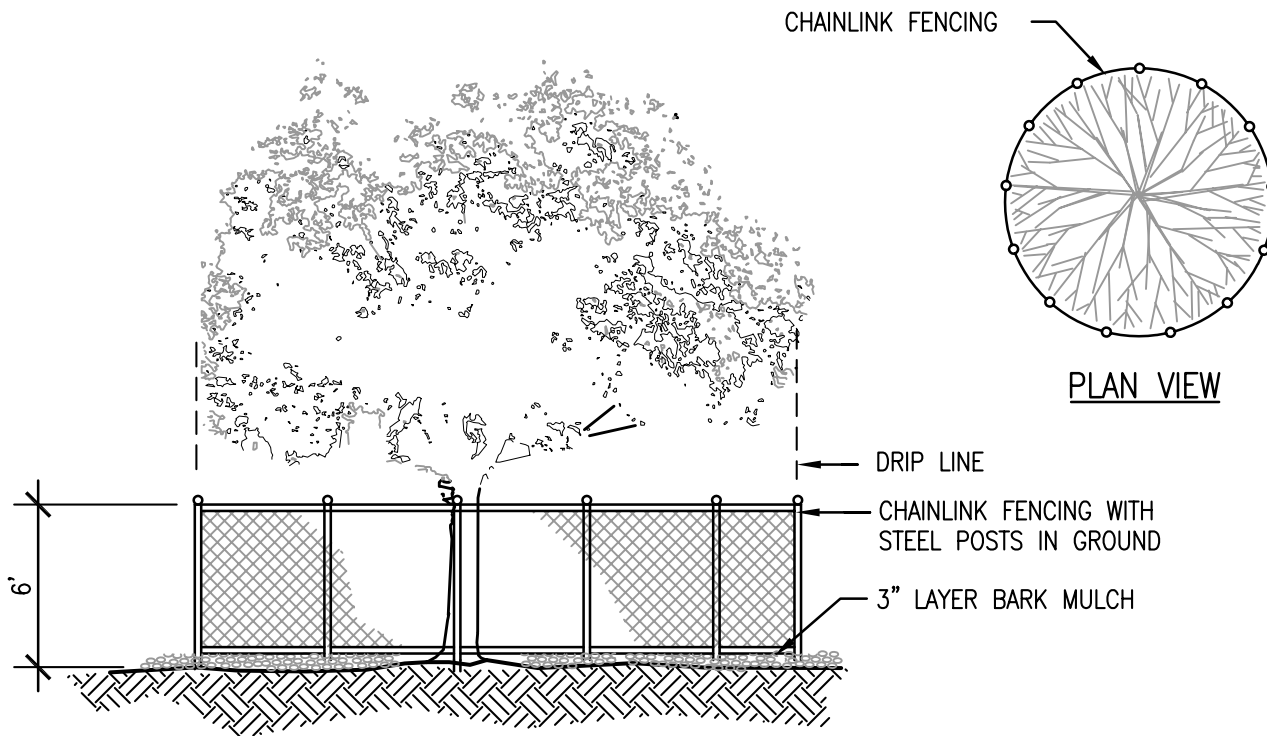
City Engineer

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NOTES

1. CURRENT STANDARD DETAIL AT CITY ENGINEERING DIVISION SHALL PREVAIL.

TREE PRESERVATION NOTES

1. TREE PRESERVATION MEASURES MUST BE IN PLACE BEFORE CONSTRUCTION, DEMOLITION AND/OR GRADING ACTIVITIES COMMENCE. CITY OF FREMONT WILL STOP CONSTRUCTION IF TREE PRESERVATION MEASURES ARE NOT IN PLACE AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
2. TREES CALLED OUT FOR PRESERVATION SHALL BE FENCED AT THE DRIPLINE. FENCING MAY OCCUR AT THE COMBINED DRIPLINES OF GROVES OF TREES. PLACE 3" BARK MULCH BENEATH DRIPLINES OF TREES TO BE PRESERVED.
3. FENCING SHALL BE 6-FOOT TALL CHAIN LINK FENCING WITH STEEL POSTS EMBEDDED IN THE GROUND.
4. NO GRADING SHALL OCCUR WITHIN THE DRIPLINES/FENCED AREA OF EXISTING TREES.
5. NO CONSTRUCTION MATERIALS OR CONSTRUCTION VEHICLES MAY BE STORED WITHIN THE DRIPLINES/FENCED AREA OF EXISTING TREES.
6. CONSTRUCTION VEHICLES OR MACHINERY MAY NOT PASS BETWEEN TWO OR MORE EXISTING TREES IDENTIFIED FOR PRESERVATION IF THEIR CANOPIES ARE WITHIN 10 FEET OF TOUCHING. ADDITIONAL FENCING MAY BE REQUIRED BY THE CITY OF FREMONT TO ENFORCE THIS.
7. THE CONTRACTOR IS REQUIRED TO HAVE AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) ON SITE IF SITE CONSTRUCTION EFFORTS REQUIRE REMOVAL OF EXISTING ROOTS OR BRANCH PRUNING.
8. UNAUTHORIZED TREE REMOVAL IS SUBJECT TO REPLACEMENT EQUAL TO THE APPRAISED VALUE OF THE TREE LOST.
9. THE CONTRACTOR IS REQUIRED TO WATER, FERTILIZE AND ATTEND TO OTHER MAINTENANCE NEEDS OF EXISTING TREES TO MAINTAIN HEALTHY GROWTH THROUGHOUT THE CONSTRUCTION PERIOD. AN EARTH BERM MEASURING MINIMUM 6 FT IN DIA. AND 6 IN. HEIGHT SHALL BE CONSTRUCTED AT THE BASE OF EACH TREE TO FUNCTION AS A TEMPORARY WATERING BASIN DURING THE CONSTRUCTION PERIOD. TREES SHALL BE WATERED ACCORDING TO WEATHER AND TREE REQUIREMENTS.
10. IF TREES ARE BEING RELOCATED: RELOCATION OF EXISTING TREES SHALL OCCUR UNDER THE OBSERVATION AND DIRECTION OF A CERTIFIED ARBORIST APPROVED BY THE CITY OF FREMONT.

CITY STANDARD TREE PROTECTION FENCING

Designed RER

Drawn PHM

Scale NTS



DEVELOPMENT AND ENVIRONMENTAL SERVICES

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City Engineer

07/02

Sr. Landscape Architect

07/02

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